In the Claims:

1.-39. (Cancelled)

40. (Currently Amended) A method of making an attenuating and phase-shifting mask for use in semiconductor manufacturing, the method comprising:

obtaining a prefabricated mask blank designed for use with light of a first wavelength, wherein the prefabricated mask blank was made by a first company, the prefabricated mask blank comprising:

a transparent layer, and

an attenuating and phase-shifting layer (attPS layer) formed on the transparent layer, the attPS layer having an initial attPS-layer thickness, wherein the prefabricated mask blank is adapted for etching clear areas into the attPS layer and [[etch]] stopping the etching of clear areas at the transparent layer so that the initial attPS-layer thickness and the clear area without attPS layer material thereat will provide a first predetermined phase shift and a first predetermined transmittance for light of the first wavelength; and

patterning and adapting the prefabricated mask blank to be an adapted-patterned mask for use with light of a second wavelength, so that a second predetermined transmittance and a second predetermined phase shift are provided by light of the second wavelength passing through dark areas of the adapted-patterned mask relative to light of the second wavelength passing through clear areas of the adapted-patterned mask, wherein the second wavelength is smaller than the first wavelength, wherein the patterning and adapting is performed by a second company, the second company being different than the first company, the patterning and adapting comprising:

reducing the attPS-layer thickness of the attPS layer to a first attPS-layer thickness

at the dark areas, and

patterning and etching the attPS layer to form the clear areas, wherein the attPS layer remains with a second attPS-layer thickness at the clear areas, the second attPS-layer thickness being smaller than the first attPS-layer thickness, wherein the transparent layer has a same thickness at the clear areas and the dark areas.

41. (Cancelled)

42. (Currently Amended) The method of claim 40, wherein the patterning and adapting further comprises:

before the reducing of the initial attPS-layer thickness of the attPS layer and before the patterning and etching of the attPS layer to form the clear areas, determining the first and second attPS-layer thicknesses for providing the second predetermined transmittance and the second predetermined phase shift by using the equations

$$\Phi_t = [2(n_t-1)(D_1-D_3)/\lambda_t]180°,$$

$$T_1 = A_t \exp(-4\pi k_t D_1/\lambda_t),$$

$$T_2 = A_t \exp(-4\pi k_t D_3/\lambda_t),$$

$$T_t = T_1/T_2 = \exp[-4\pi k_t (D_1-D_3)/\lambda_t],$$ where

λ_t is the second wavelength,

n_t is refractive index of the attPS layer at λ_t,

k_t is extinction coefficient of the attPS layer at λ_t,

A_t is a constant for the attPS layer at λ_t,

D_1 is the first attPS-layer thickness,

D_3 is the second attPS-layer thickness,

T_1 is a first transmittance through the dark areas based on using D_1 and λ_t,

T_2 is a second transmittance through the clear areas based on using D_3 and λ_t,

Φ_t is the second predetermined phase shift, ~~shift of light at λ_t through the dark areas relative to light at λ_t through the clear areas, based on using D_1 for the dark areas, D_3 for the clear areas, and λ_t;~~

T_t is the second predetermined transmittance. ~~transmittance of light at λ_t through the dark areas relative to light at λ_t through the clear areas, based on using D_1 for the dark areas, D_3 for the clear areas, and λ_t.~~

43. (Previously Presented) The method of claim 40, wherein the reducing of the initial attPS-layer thickness of the attPS layer to the first attPS-layer thickness is performed prior to the patterning and etching of the attPS layer to form the clear areas.

44. (Previously Presented) The method of claim 40, wherein the second predetermined phase shift is about 180 degrees or greater.

45. (Previously Presented) The method of claim 40, wherein the second predetermined transmittance is between about 2% and about 20%.

46. (Previously Presented) The method of claim 40, wherein the second predetermined transmittance is between about 5% and about 15%.

47. (Previously Presented) The method of claim 40, wherein the second predetermined transmittance is about 6% or less.

48. (Previously Presented) The method of claim 40, wherein the reducing of the initial attPS-layer thickness of the attPS layer to the first attPS-layer thickness is by etching.

49. (Previously Presented) The method of claim 48, wherein the reducing of the initial attPS-layer thickness of the attPS layer to the first attPS-layer thickness is by reactive ion etching.

50. (Previously Presented) The method of claim 40, wherein the etching of the attPS layer to form the clear areas is by reactive ion etching.

51.-52. (Cancelled)

53. (Currently Amended) A method of making an attenuating and phase-shifting mask for use in semiconductor manufacturing, the method comprising:

obtaining a prefabricated mask blank designed for use with light of a first wavelength, wherein the prefabricated mask blank was made by a first company, the prefabricated mask blank comprising:

a transparent layer, and

an attenuating and phase-shifting layer (attPS layer) formed on the transparent layer, the attPS layer having an initial attPS-layer thickness, wherein the prefabricated mask blank is adapted for etching clear areas into the attPS layer and [[etch]] stopping the etching of clear areas at the transparent layer so that the initial attPS-layer thickness and the clear area without attPS layer material thereat will provide a first predetermined phase shift and a first predetermined transmittance for light of the first wavelength; and

patterning and adapting the prefabricated mask blank to be an adapted-patterned mask for

use with light of a second wavelength, so that a second predetermined transmittance and a second predetermined phase shift are provided by light of the second wavelength passing through dark areas of the adapted-patterned mask relative to light of the second wavelength passing through clear areas of the adapted-patterned mask, wherein the patterning and adapting is performed by a second company, the second company being different than the first company, wherein the second wavelength is ~~at least 30 nm~~ smaller than the first wavelength, the patterning and adapting comprising:

reducing the attPS-layer thickness of the attPS layer to a first attPS-layer thickness at the dark areas, and

patterning and etching the attPS layer to form the clear areas, wherein the attPS layer remains with a second attPS-layer thickness at the clear areas, the second attPS-layer thickness being smaller than the first attPS-layer thickness, wherein the transparent layer has a same thickness at the clear areas and the dark areas, and

before the reducing of the initial attPS-layer thickness of the attPS layer and before the patterning and etching of the attPS layer to form the clear areas, determining the first and second attPS-layer thicknesses for providing the second predetermined transmittance and the second predetermined phase shift by using the equations

$$\Phi_t = [2(n_t-1)(D_1-D_3)/\lambda_t]180°,$$

$$T_1 = A_t \exp(-4\pi k_t D_1/\lambda_t),$$

$$T_2 = A_t \exp(-4\pi k_t D_3/\lambda_t),$$

$$T_t = T_1/T_2 = \exp[-4\pi k_t (D_1-D_3)/\lambda_t], \text{ where}$$

λ_t is the second wavelength,

n_t is refractive index of the attPS layer at λ_t,

k_t is extinction coefficient of the attPS layer at λ_t,

A_t is a constant for the attPS layer at λ_t,

D_1 is the first attPS-layer thickness,

D_3 is the second attPS-layer thickness,

T_1 is a first transmittance through the dark areas based on using D_1 and λ_t,

T_2 is a second transmittance through the clear areas based on using D_3 and λ_t,

Φ_t is the second predetermined phase shift, ~~shift of light at λ_t through the dark areas relative to light at λ_t through the clear areas, based on using D_1 for the dark areas, D_3 for the clear areas, and λ_t;~~

T_t is the second predetermined transmittance. ~~transmittance of light at λ_t through the dark areas relative to light at λ_t through the clear areas, based on using D_1 for the dark areas, D_3 for the clear areas, and λ_t.~~

54.–67. (Cancelled)